

in proportion to the leaves; 12. the colour of the plant is darker, and when fresh of an olive-green; 13. the growth is more tufted; 14. the calyx, though absolutely less than in *Jung. bicuspidata*, L., yet, relatively to the size of its own leaves and stems, is greater and more elongated; 15. the calyx is narrower above; 16. the capsule is far shorter in figure and quite characteristic; 17. the *gemmæ* are smooth, never angular, and situated on clusters of leaves and not on a naked *capitulus*. It only remains to add, that our plant differs from *Jung. connivens*, Dicks., by smaller size, much minuter reticulation, by the leaves not being decurrent, by its subpinnate habit, to say nothing of the less tumid and more acuminate calyx.

April 18, 1843.

XII.—*List of Birds obtained in the vicinity of Calcutta, from September 1841 to March 1843 inclusive.* By EDWARD BLYTH, Curator to the Museum of the Asiatic Society of Bengal.

1. *Palæornis Alexandrinus*; *P. Nipalensis*, Hodgson, 'As. Res.' xix. 177. A hill species, not usually met with in the low country, but has occasionally been observed in the Calcutta Botanic Garden.

2. *P. torquatus*. Very abundant, in flocks of from two or three to twenty. I have seen a pair alight and walk about on the parapet of a house. Flight rapid, and their screaming cry is frequently emitted on the wing, announcing their approach.

3. *P. Bengalensis*. This beautiful species is much less common than the last, though still not rare. It is also less noisy, and I have always observed it in small flocks.

4. *P. Pondicerianus*. This fourth Bengalese species is almost exclusively confined to the hills, but is brought in tolerable abundance to the Calcutta shops. It has not been observed by Mr. Jerdon in the peninsula of India, though named *Pondicerianus*; but it is plentiful on the opposite coast of the Bay of Bengal, and as I saw numerous parrots of this genus flying across the bay, when making for Madras, it might be inferred that the same species inhabit both coasts; though perhaps this may apply only to *P. torquatus* and *P. Bengalensis*, which are frequent in the plain country*.

* The only additional species of this genus known to me, except the Australian (so-called) *P. Barrahandi*, are, in India, *P. schisticeps*, Hodgson, 'As. Res.' xix. 178, peculiar to the Himalaya, and *P. columboides*, Vigors, on the Neilghierries: the Malay countries produce *P. Malaccensis*; and I have just received a female specimen from the Mauritius, which is probably referable to *Ps. bitorquatus*, Kuhl: *P. xanthosomus*, Bechstein, said to inhabit Ternate, rests on the authority of a description by Levaillant, who saw a living specimen. The remaining described species in Mr. Vigors's Monograph of this genus (*Zool. Journ.* ii. 49 *et seq.*) are merely nominal. Closely allied to *Palæornis* is my genus *Psittinus* (*Journ. As. Soc. Beng.* xi. 789), founded on the *Psittacus Malaccensis*, Latham, not of Gmelin, and apparently comprising the remarkable *Ps. setarius* of Temminck.—E. B.

N.B. I am uncertain whether to include the little *Psittaculus vernalis*, Sw., which is brought in great numbers to the shops of the Calcutta dealers, most probably from the hilly parts of Bengal. It abounds in many districts of the South of India, and in the Tenasserim provinces.

5. *Falco chicquera*. Not unfrequent. A particularly handsome species as seen alive. The name *Shikra* is bestowed by the Bengalees generally on any small hawk or falcon, though more especially on the female *Astur Dussumieri*.

6. *F. subbuteo*. Visits the neighbourhood of Calcutta during the hyemal months.

7. *F. tinnunculus*. Common.

8. *F. tinnunculoides*. Somewhat rare.

9. *Astur Dussumieri*; *Accipiter Dukhunensis*, Sykes, and *A. scutarius*, Hodgson—the young. Very common. I arrange this bird in *Astur*, as Mr. Gould has arranged the allied Australian species—*A. approximans* and *A. cruentus*.

10. *Accipiter nisosimilis*, Tickell (Journ. As. Soc. Beng. ii. 571); *A. nisus* v. *fringillarius* of Jerdon and others, but distinguished from the European *A. nisus* by its greater size, white superciliary lines, &c. Not common near Calcutta, but very frequent in India generally.

11. *Circus melanoleucos*. Common. Both sexes alike.

12. *C. Swainsonii*, A. Smith; *C. pallidus*, Sykes. Common.

13. *C. Montagui*. Less common than the two preceding species.

14. *C. rufus*. Common.

15. *Circæetus undulatus*; *Hæmatornis undulatus*, Vigors and Gould. Not common within a few miles of Calcutta, but becomes so at that distance. One or two pairs may frequently be seen hovering over Barrackpore Park.

16. *Spizaëtus niveus*; *Falco niveus*, Tem.; *Nisaëtus Nipalensis*, Hodgson (Journ. As. Soc. Beng. v. 229): not the doubtfully cited *N. niveus*, Jerdon, which is *N. grandis*, Hodgson (*ibid.*): probably *F. caligatus*, Raffles (Lin. Trans. xiii. 278). Common about high jungle, and much resembling *Buteo vulgaris* in its habits. The young have the pure white under parts spotless or nearly so, a dark central streak on each feather increasing at each moult; and I have shot one female (which was paired with a mate of the ordinary colour) that was wholly dusky-black, with an ashy tinge on the back, the irides, as usual, brilliant yellow, and contrasting finely with the blackish plumage.

17. *Haliaëtus Macei*; *H. albipes*, Hodgson, and the young—*H. unicolor*, Hardwicke and Gray. Not uncommon along the river, and descends (as I am informed) occasionally on carrion.

18. *H. Pondicerianus*. A very common and conspicuous species, abundant along the river, and generally observed near water; has a peculiar strange bleating cry. It is amusing to remark the differences of opinion expressed by different observers concerning its systematic station. Thus, Dr. W. Jameson writes—"No person who has ever studied this bird in its native haunts on the Hooghly or the

Ganges, where it occurs in vast numbers, in company with other *Haliaëti*, would for a moment doubt where its proper position ought to be in the ornithological system*:" whilst Mr. Hodgson maintains that—"Those who have classed the *Brahmani Cheel* of India with the fishing eagles, may be safely said to know as little of the structure as of the habits of that paltry *Milvine* bird; or else of the group with which they have associated it†." For my part, I much prefer to retain it as an aberrant *Haliaëtus*, the principal difference relating to the comparative size of the feet; and I refer to Mr. Jerdon's excellent description of the habits of this bird ‡, conforming entirely with my observation of it, in corroboration of this view of its affinities, though Mr. Jerdon rather inclines to Mr. Hodgson's opinion on the subject, and even ranks it as an aberrant species of *Milvus*.

19. *Ichthyiaëtus cultrungius*, nobis (Journ. As. Soc. Beng. xi. 110). This bird was described, but not named, by Latham, whose work I have not now to refer to. It is beautifully figured among the drawings of the late Dr. Buchanan Hamilton. The species is not uncommon in the Soonderbuns, but I have obtained only one individual in the vicinity of Calcutta.

20. *Pandion haliaëtus*. The osprey is more or less common in suitable districts throughout India, and is now and then seen near Calcutta. I have obtained one recent specimen.

21. *Milvus Cheele*; *M. govinda*, Sykes. Excessively numerous about human abodes, but rarely, if ever, seen at a distance from them. It is not unusual to see a hundred or more circling in the air together, especially towards the evening, all collected about one spot, though there may be no refuse to entice them thither; or if some garbage be thrown out, their dexterity at clutching whatever they can seize, without alighting, a number of them rapidly following each other and descending thus in the most crowded streets, affords a curious spectacle; a few will generally alight and mingle among their fellow-scavengers the crows, while a crowd of others are circling and dashing over them, and stooping as they sweep by. In illustration of their boldness, I may mention that I once received a smart knock from the wing of one of these birds in a crowded bazar, as he passed close to my shoulder from behind§. The direct flight of this kite, when not sailing, is heavy and laboured, being relieved at intervals by gliding with motionless wings: numbers may commonly be seen overhead buoyantly floating and gliding in easy curves, yet keeping much together, whether sailing high or low; and their descent upon any garbage is very rapid, and often spiral. They are decidedly social, and many may daily be seen together sitting on a dead tree, or the parapet of a house, preening or sunning themselves, while others are sailing about above them. Their often-repeated cry

* Calc. Journ. Nat. Hist. i. 318. † Journ. As. Soc. Beng. vi. 368.

‡ Madras Journal of Literature and Science, No. xxiv. 72.

§ With the British kite, *tempora mutantur*. Pennant has shown that these formerly (in Henry the Eighth's time) abounded in the streets of London, and would pick up food from amidst a crowd of people, being protected by law in their useful capacity of scavengers.

is a tremulous shrill squeal (whence the native appellation *Cheele*) resembling that of the British kite. They subsist mainly on filth and refuse, but will readily pick up a chick or wounded bird, and I once knew one to kill a full-grown hen: this, however, was considered rather an anomalous occurrence, and they seem to be generally on excellent terms with the crows; though I have been told, and on good authority, that a kite will sometimes seize a crow, probably when pressed by hunger, albeit the uproarious clamour of all the crows in the neighbourhood, sure to collect on such an occasion, might suffice to deter him from doing so a second time. During the rainy season the kites totally leave Calcutta for three or four months, not, however, for breeding, for the young have then all flown; and the Brahminee Cheels (*Hal. Pondicerianus*) in like manner disappear from the river.

22. *Elanus melanopterus*. Not uncommon.

23. *Hyptiopus* (Hodgson, olim *Baza*, H.) *lophotes*; *Falco lophotes*, Tem.; *Baza syama*, Hodgson. Rare.

24. *Vultur Pondicerianus*. By no means common. Like its near ally, the South African *V. auricularis**, with which it forms a particular minor group, this species is only seen singly or in pairs—never in flocks. Upon one descending on a carcass, whereon a crowd of the next species are gorging, these all make way for it and keep aloof till it is gone (so, at least, I have repeatedly been informed), whence it currently bears the name of *King Vulture* amongst our countrymen.

25. *V. leuconotus*. The common vulture of India generally, very numerous in the Gangetic Delta.

26. *Neophron percnopterus*. The *Rachamah*, so very abundant in Southern India, is here of rare occurrence. The Society's Museum contains a specimen shot in the neighbourhood; and I was told that several appeared about the Botanic Garden after the hurricane of the 1st of June last.

27. *Strix flammea*; *Str. Javanica* of Mr. Jerdon's catalogue. As numerous about Calcutta as in England, and presenting no difference whatever from the British bird.

28. *Ninox lugubris*; *Strix lugubris*, Tickell (Journ. As. Soc. Beng. ii. 578); *Ninox Nipalensis*, Hodgson (Madr. Journ. No. xiv. 23). Tolerably common.

29. *Athene brama*; *Strix brama*, Temminck; *Noctua Indica*, Franklin. Common.

30. *Otus brachyotus*. Common during the cool season.

31. *Buceros Malabaricus*. Inhabits the Soonderbuns, and may not unfrequently be purchased alive of the Calcutta dealers.

32. *Upupa epops*. Common in the winter months. In Southern India it is replaced by the smaller and more rufous species—*U. minor*; but Mr. Jerdon has sent me a specimen from the Neilghierries.

33. *Merops Indicus*. Extremely common, but disappears in the rainy season. It breeds in the neighbourhood, as I have had specimens brought me with eggs ready to lay in the month of March.

* Proc. Zool. Soc. 1833, p. 45.

The general habits of this pretty little green bee-eater are those of a flycatcher, but it frequently hawks for insects on the wing, many together, like swallows.

I have been informed that *M. Phillippinus* may occasionally be shot in the vicinity of Calcutta, but is rare.

34. *Coracias Indica*. Common, but for the most part disappearing at the time of the rains. This roller sits very upright on its perch, with the body-feathers appressed, and those of the head and neck puffy. Its flight is buoyant, but sustained by constant flapping; and I have now and then seen one, or a pair, when seeming about to alight on a tree, make a rapid dive downward to near the ground, then reascend, and perform this manœuvre several times successively as if in play. Its usual note is harsh, but in spring the male utters a very pleasing dissyllabic cry, repeated at intervals.

35. *Eurystomus orientalis*. I have seen a living specimen in the possession of a dealer.

36. *Halcyon Capensis*. Common at all seasons.

37. *H. amauropterus*, Pearson (Journ. As. Soc. Beng. x. 635). Not rare during the cool season, and perhaps also at other times. Is a noisy species, with a much harsher and more grating cry than the last.

38. *H. Smyrnensis*. Common. These three species feed partly on fish and sometimes frogs, but more on crustaceans.

In the Asiatic Society's museum is a specimen closely allied to *H. Smyrnensis*, having the white on the under parts confined to the throat, and the black wing-spot much enlarged, spreading over the shoulder of the wing, which in the typical *Smyrnensis* is rufous-bay. Its native locality is unknown.

39. *Ceryle rudis*; *Ispida bitorquata*, Swainson—the male. Common.

40. *Alcedo Bengalensis*. This closely allied diminutive of the British kingfisher is very abundant.

41. *Bucco cyanops*. Abundant.

42. *B. Phillipensis*. Still more numerous than the preceding species. *B. viridis* (vel *caniceps*) does not appear to inhabit this neighbourhood.

43. *Picus strictus*, Horsfield; *P. sultaneus*, Hodgson; *P. strenuus*? Gould. Rare.

44. *P. Bengalensis*. Extremely common.

45. *P. Nipalensis*; doubtfully cited *P. mentalis* of Mr. Jerdon's catalogue. Rare.

46. *P. badius*, Raffles; *P. rufus*, Hardwicke and Gray. Not common.

47. *P. Macei*. Common.

48. *Yuna torquilla*. The museum contains a specimen that was captured alive in Calcutta.

49. *Cuculus fugax*. Abundant.

50. *C. canorus*. Rare.

51. *C. micropterus*. Rare.

52. *C.* (subgenus *Gymnopus*, nobis) *niger*, Latham. Not uncommon.

53. *Oxylophus edolius*. Not rare.

54. *O. Coromandus*. Rare.

55. *Centropus Phillipensis*. Common.

N.B. For notices of the preceding and other oriental *Cuculide*, vide my monograph of the group, published in the Bengal Asiatic Society's Journal, N.S., Nos. 46 and 47.

56. *Caprimulgus Gangeticus*, nobis. Rather common.

57. *C. monticolus*, Franklin. Rare.

58. *C. Asiaticus*. Very common; but all three species found only in the winter months. The females of *C. Asiaticus* have the white spots on the wings and tail as in the other sex.

59. *Cypselus affinis*. Very common, but confined to urban districts, roosting and breeding under the roofs of houses, oftentimes at no great distance from the ground in crowded thoroughfares.

60. *C. palmarum*. A rural species, also very common, and roosting and breeding in the fronds of the fan-leaved palms. Both these swifts are permanently resident throughout the year.

61. *Corvus macrorhynchus*, Wagler; *C. culminatus*, Sykes; *C. corone*, var. Franklin. Chiefly found along the river bank, preying on carrion. This bird is styled *Raven* by Europeans, which has given rise to the current notion that the *C. corax* inhabits the plains of India, which it does not, except partially in the immediate vicinity of the Himalaya.

62. *C. splendens*, Vieillot. The common crow of India. A most abundant, very noisy, familiar, and impudent species, frequenting the vicinity of human abodes, alike in the villages and in the crowded streets of large towns. About the latter they walk and hop like domestic birds, wherever food is to be picked up, just stepping aside out of the way of the passers-by, and regardless of the ordinary throng: but they still retain all the craft and wariness of their tribe, and are ever vigilant, making off on the least suspicious movement, or even on the fixed glance of a stranger: they require but small encouragement, however, to be most troublesomely bold, and do not always wait for such encouragement, peeping into dwelling-rooms, cawing loudly the while, passing through them by different windows, and if opportunity offers, making free with anything that attracts them by the way. Though highly social, this crow is not properly gregarious, like the rook and jackdaw of England; and does not build in society, resembling the *C. corone* in this respect, though, from its commonness, two or three pairs may sometimes resort to the same large tree. Their noise, from the multitude of them, is incessant; and if anything (as the sight of a dead crow) excite them, is most uproarious and annoying. They are about, too, from the earliest dawn till late in the evening, and are far from being quiet on moonlight nights. Eager, busy, and bustling, their flight is always singularly hurried, as if time were a matter of some consequence to them; and, in short, every trait of the crow tribe is prominently developed in this species.

The report of a gun excites a grand commotion among the community of crows; they circle and cross rapidly to and fro overhead, for the most part out of range, cawing lustily, and dodging when the

tube is pointed at them, while others sit observantly on the neighbouring house-tops, &c., all launching on the wing on the next discharge with clamorous outcry, and then, by degrees, returning to their place of observation. Thus, too, they persecute the gunner when in quest of other birds, spreading the alarm in all directions : and I remember, once, when loading beside a large tank, a pair of the fine Caspian tern came and dashed by two or three times within range, but just as I was ready for them a wild crow made his appearance and attacked one of them, being soon joined by others of his fraternity, who speedily drove away the pair of terns without affording me the wished-for chance of a shot. Again, I have seen a crow of this species pounce on a pied harrier (*Circus melanoleucos*) which was standing quietly on the bank of a rivulet, and continue to attack and follow it till both were out of sight. On one occasion I remarked a number of crows and mynabs collected around some horse-droppings on a road, when one of the crows pertinaciously prevented a particular individual mynab from partaking with the rest of the party ; again and again did the poor mynab make the attempt, stepping round and approaching from different directions, but all to no purpose, the crow meanwhile paying no attention to the other mynabs of the same species (*Pastor tristis*) which were engaged in picking out the grains. But the most remarkable fact I have observed of this crow was during my short sojourn at Madras, where a party of about twenty were in the daily habit of attending the breakfast of the friend at whose house I was staying, without, however, being allowed to enter the room : among these were two blind, or rather purblind, crows, which could just see their way about, without apparently being able to pick up small articles of food, and these were regularly fed by the rest, first one and then another of which they followed with imploring demeanour and quivering wings, like a nestling, and received the morsels with the same gobbling note of gratulation. They were evidently old birds, and perhaps aged ; and it recalled to mind an anecdote related by Levillant of two barbets (*Bucco*) which that observer found in a compartment of one of the great compound nests of a species of weaver-bird, and which from their helpless state, but good condition, must evidently have been fed by others for some time.

63. *Crypsirina vagabunda* ; genus *Dendrocitta*, Gould, *Phrenothrix*, Horsfield. Very common, and the only species of its group found in this neighbourhood. I have never seen it alight on the ground.

64. *Gracula religiosa* ; *Eulabes Javanus* (?), Cuvier. The common hill mynab of the shops, but brought from some distance. It does not appear to inhabit the low country.

65. *G. Indicus* (?) ; *Eulabes Indicus* (?), Cuvier. Smaller than the preceding species, with the bill considerably more slender, the velvety space on the sinciput much reduced in size, and bounded above as well as below by the naked skin. I have obtained a cage-specimen, and seen no other example.

66. *Pastor tristis*. An abundant and very familiar species, being another of the street-birds of Calcutta, though keeping chiefly to

the more open situations : it mingles freely with the crows ; and a pair not unfrequently enter my sitting-room, the male treating me with his loud screeching song therein : they breed in nooks of houses, and very commonly in vessels hung out for that purpose by the natives.

67. *Pastor Gingianus* (Bank Mynab). Brought plentifully to the shops from some distance, and breeds in holes in the banks of rivers.

68. *P. cristatellus*. Common, and scarcely less familiar than *P. tristis*, but is never seen in the streets. In Southern India this species is replaced by the nearly allied *P. fuscus*, vel *Mahrattensis* of Sykes.

69. *P. pagodarum* (Brahminee Mynab). Flocks of this species are not unfrequently met with on the arboreal-cotton trees, when in blossom in February ; but the shops are not supplied from this neighbourhood.

70. *P. caniceps*, Hodgson. This I take to be the true *Turdus Malabaricus* of Gmelin, which Mr. Jerdon has assigned to a nearly allied species which seems to be confined to the Malabar range and its vicinity, while the present species is generally rare in the Indian peninsula, but abounds in Bengal, Assam and Nepâl. It has a gray head and neck, and rufous breast and belly ; while the other has the head, neck and breast silky-white, with also a longer tail. Very common.

71. *P. roseus*. Visits the arboreal-cotton trees in February, like *P. pagodarum* ; but the shops are supplied from elsewhere, and this species is not often to be procured in them.

72. *Sturnopastor* (Hodgson) *contra*. A very abundant species, and scarcely less familiar in its habits than *Pastor tristis*, but does not venture into the streets.

73. *Sturnus Indicus*, Hodgson. Differs from *St. vulgaris* in its longer bill, which never becomes yellow at any age. Now and then brought to the shops in considerable numbers, but is not met with in this neighbourhood.

74. *Malacocercus terricolor*, Hodgson. The *Chatorrhæa* of Bengal, not of Southern India. A most abundant and conspicuous species in Bengal and Nepâl, which appears only now to have received a name. It seems also to be the only species found in this part of the country, and is nearly allied to *M. Somervillei*, but Mr. Jerdon considers it as distinct, and I should like to see more specimens of the latter before pronouncing an opinion. See Journ. As. Soc. Beng. x. 650, for a notice of its habits, under its most frequent appellation of *Saat Bhye*.

75. *Timalia* (?) *hypoleuca*, Franklin ; *T. Horsfieldi*, Jardine and Selby. I have only procured this species in the shops, where one or two may now and then be met with, which I understand are taken in the neighbourhood. It is certainly a very aberrant *Timalia*, and its form and actions remind one strongly of *Calamophilus biarmicus*, which is so abundantly brought alive to the London markets from Holland.

76. *Orthotomus Bennettii*. The common tailor-bird of India. Extremely common.

77. *Iora typhia*; *I. scapularis*, Horsfield. A very plentiful species, resident at all seasons.

78. *Turdus* (*Oreocincla*, Gould) *Whitei*. I obtained three specimens in the course of the last cold season.

79. *Geocichla rubecula*. Common in the winter months, and replaced in Southern India by *G. cyanotis*, Jardine and Selby.

80. *Calliope Lathamii*. Not rare during the cool season. Is closely allied to *Turdus*.

81. *Copsychus saularis*, Wagler. The *Doyal*. This handsome bird and pleasing songster is tolerably abundant.

82. *C. macrourus*; *Kittacincla macroura*, Gould. The *Shahmour*. Reputed, and probably with truth, to be the finest of oriental songsters. Its notes more resemble those of the blackcap (*Curruca atricapilla*) than any other British bird, but far exceed them in variety and prolongation; besides which the shahmour has a considerable propensity to imitation, and one in my possession has recently learned to give the crow of a cock to perfection, also the notes of the Coël and *Cuculus fugax*, the chatter of a troop of *Saat Bhyes* (no. 74), &c. Many thousands of these elegant birds are kept in cages in Calcutta, and the universal absurd practice is to darken their cages by wrapping them with several folds of cloth, enough to stifle the luckless captives in this climate, though it must be confessed they sing most vigorously while thus circumstanced, but certainly not more so than mine which are exposed to the light and air. It is a practice of the rich natives to employ servants to carry about their shahmours and other birds, and the number of shahmours which are thus borne about the streets of Calcutta is astonishing; the poor birds are shut out from all light and air, like Mahommedan ladies enjoying (!) their evening drive, but they nevertheless (*i. e.* the birds) sing forth most lustily and melodiously, so sweetly as often to arrest the attention of the passer-by. The shahmour is brought from the hilly parts of the country, being never met with in the alluvial tract of Lower Bengal.

83. *Phænicura atrata*, Jardine and Selby. Not uncommon. This appears to be the only species of Indian true redstart found away from the Himalaya.

84. *Phyllopneuste reguloides*, nobis. Journ. As. Soc. Beng. xi. 191, and since further described by me. Not uncommon in the cool season, and I have obtained one late in March.

85. *Ph. modesta*; *Regulus modestus*, Gould; *R. inornatus*, nobis, Journ. As. Soc. Beng. xi. 191. Tolerably common, and breeds in the vicinity of Calcutta in March, as elsewhere described by me. At this time their plumage is ordinarily much worn, and the mesial pale streak on the crown is in general more or less obliterated. The song-note of this species is somewhat like that of *Ph. sibilatrix*, but much weaker.

86. *Ph. fuscata*, nobis, Journ. As. Soc. Beng. xi. 113. I have not yet obtained a second individual of this well-marked species, which is at once distinguished by its large size and prevalent brown colour.

87. *Ph. affinis*, nobis.

88. *Phyllopneuste lugubris*, nobis. Two nearly allied species, and

the former especially bears a close affinity to the European *Ph. rufa*, but has a different note, and is certainly distinct from it. The other is much darker in colour, particularly on the head, and has an ashy breast*. Both are common.

89. *Acrocephalus turdoides*; *Turdus arundinaceus*, Gmelin; *Sylvia turdoides*, Temm.; *Agrobates brunescens*, Jerdon. Not uncommon during the cold season.

90. *A. montana*; *Sylvia montana*, Horsfield, apud Jerdon. Tolerably common.

✓ 91. *Megalurus toklao*; *Turdus toklao*, Buchanan Hamilton, MS.

✓ 92. *Dasyornis striatus*; *Megalurus striatus*, Jerdon; *D. locusteloides*, nobis.

93. *D. colluriceps*, nobis. For notices of these three species, of each of which I have obtained a single live specimen (more or less mutilated) from the bazar shikarees, see Journ. As. Soc. Beng. xi. 602-3.

94. *Curruca hortensis*. I both heard the song and had repeatedly a distinct view of a bird of this species when watching for nobler game with both barrels loaded with heavy shot, so that I did not secure the specimen.

95. *Chaitairis* (Hodgson, olim *Niltava*, H.) *rubeculoides*; *Phœnicura rubeculoides*, Vigors and Gould. Of this I have obtained a single specimen late in March. It is an aberrant member of Mr. Hodgson's very natural genus, and closely allied to *Muscicapa banyumas*, Horsfield (also an Indian bird inhabiting the peninsula), which must therefore be ranged with it.

96. *Dimorpha* (Hodgson, olim *Siphia*, H.) *leucura*; *Muscicapa leucura*, Latham; *Saxicola rubeculoides*, Sykes—the old male. Common in the cool season, and met with at least so late as April. Still it is difficult to procure specimens in fully mature plumage. One only I have obtained with the gular marking on the throat and fore-neck of a deep ferruginous, like the breast of an English robin; another had the same mark paler and less clearly defined; many have a slight tinge of rufous about the chin, but the great majority have no appearance of it.

97. *Culicipeta Burkii*, nobis; *Sylvia Burkii*, Burton, Proc. Zool. Soc. 1835, p. 153. Not uncommon. I should have placed this form next to *Phyllopneste*, but have not been paying much attention to arrangement in the present catalogue. It is, in fact, a *Phyllopneste* with a narrow flycatcher's bill, and the usual rictorial *vibrissæ*.

98. *Saxicola rubicola* (?). The plumage of the females renders it doubtful whether this be quite identical with the species of Europe, and Mr. Hodgson I find entertains the same opinion. It is not uncommon in the winter months.

99. *S. caprata*. Occasionally to be met with in the shops of the dealers, but, I believe, not taken in the neighbourhood. It is a pleasing songster.

* From a subsequent letter from Mr. Blyth, we learn that he has since received *Phyllopneste rufa*, with *Ph. trochilus* and other species from Nepál, and that the Calcutta *Ph. affinis* is distinct from the former.—ED.

100. *Cyanecula Suecica*. I have obtained numerous specimens of this bird during the last cold season, but not any in the preceding one. All have the central mark of the breast rufous, and not white.

101. *Muscipeta paradisea*; *M. Indica*, vel *castanea*, Auct., is the once-moulted bird. By no means rare.

102. *Muscicapa melanops*. Not uncommon during the cool season.

103. *M. cærulea*, Vieillot; *M. occipitalis*, Vigors; and the female—*M. cæruleocephala*, Sykes, but not of other authors. Excessively common in the winter months.

104. *Cryptolopha poiocephala*. Of this I have obtained but one specimen during the last cool season.

105. *Rhipidura fuscoventris*. Common at all seasons, and conspicuous both for its activity and the pleasing song-notes of the male.

106. *Pericrocotus princeps*; genus *Phænicornis*, Swainson. I obtained a female (one of a pair) during last January.

107. *P. roseus*; *Muscicapa rosea*, Vieillot. Tolerably common during the cool season.

108. *P. peregrinus*. Common at all seasons.

109. *Graucalus Papuensis*; *Gr. Nipalensis*, Hodgson. Not rare.

110. *Ceblepyris melaschistos*; *Volvocivora melaschistos*, Hodgson; *Graucalus maculosus*, M'Clelland and Horsfield. Moderately common.

111. *C. fimbriatus*, Jerdon, who expresses a suspicion that *C. canus* of Sykes is merely the male. Not rare.

112. *Lanius* —? A species very like the young of *L. collurio*, and which does not appear to advance beyond the state of plumage characteristic of the young of its congeners generally, is very common in the cool season.

113. *Tephrodornis superciliaris*, Sw.; *Lanius Keroula*, Hardwicke and Gray. Common.

114. *T. concolor*, nobis. I obtained a single specimen of a female, noticed as perhaps a variety of the preceding species in Journ. As. Soc. Beng. xi. 799.

115. *Artamus rufiventer*. Common.

116. *Cometes Krishna*; *Edolius Krishna*, Gould. Tolerably common.

117. *Edolius grandis*, Gould; *Cometes Malabaroides*, Hodgson.

118. *E. retifer*, Temminck; *E. Malabaricus*, Gould. Both of these are occasionally to be met with in the shops, the former being a fine songster.

119. *Dicrurus Fingah*; erroneously ascribed to *balicassius* by authors generally; *D. albirictus*, Hodgson. A very common and most conspicuous species.

120. *D. macrocercus*; *D. annectens*, Hodgson. Far from rare.

121. *Melisseus aneus*; *M. muscipetoides*, Hodgson. Common.

N.B. For a monograph of the Asiatic Drongas, vide J. A. S. B. xi. 799 *et seq.* and note to p. 882.

122. *Ixos Cafer*. Very abundant, and replaced in Southern India by a nearly allied species—*I. pseudocafer*, nobis.

123. *I. jocosus*. Common, but considerably less so than the preceding species.

124. *Pitta brachyura*. I purchased a living specimen of a dealer, which was probably procured at no great distance.

125. *Oriolus Hodgsonii* (*Hodgsonii* ?), Swainson; *O. melanocephalus* of India, as distinguished from that of Africa, auctorum. Very common throughout the year.

126. *O. galbula*. I obtained a living specimen of this European species, which I kept for several months in confinement. Its ordinary Indian representative, *O. aureus* (common in the peninsula), I have not yet seen from this part.

[To be continued.]

XIII.—On the *Sacculi of the Polygastrica*. By W. ADDISON, Esq.
To the Editors of the *Annals of Natural History*.

GENTLEMEN,

As Dr. Griffith, in his paper "On the *Sacculi of the Polygastrica**,” has coupled my name with a very inaccurate interpretation of the effect of the *liquor potassæ* on the *Paramæcium*, allow me to abstract from my 'Experimental Researches' all that I have published on the subject.

"I had often remarked the very great similitude of size and appearance between several of the smaller forms of the Polygastric animalcules and some of the varieties of pus-corpuscles; so great is this similarity, that in many instances it would have been difficult to distinguish the one from the other, had it not been for the voluntary and very active movement of the animalcules. Now *liquor potassæ* produces upon *these* animalcules the same effect as it does on the colourless blood- and pus-corpuscles; it penetrates the transparent integument of the animalcule by imbibition, and causes it to burst open and discharge its contents, which have the same appearance as the molecules and granules from the colourless blood- and pus-corpuscles.

"In the larger forms of the polygastric animalcules there are a great number of large vesicles or cells (which have been called stomachs) very visible in their interior; and these are all discharged from the bodies of the creatures in the same way, when they are submitted to the action of *liquor potassæ*. These so-called stomachs may be seen enlarging in the interior of the animalcule prior to the rupture of the external integument; and when they are discharged from the body of the animalcule, numerous minute molecules may be seen within them†." In the former of these paragraphs it is evident that I am speaking of animalcules ten or twenty times less than the *Paramæcium*; and in the latter, when

* In the June Number, p. 438.

† Experimental Researches on Inflammation, and on the origin and nature of Tubercles of the Lungs. Churchill, 1843.